

WHAT IS CLAIMED IS:

1. A cutting tool insert comprising a coating and a cemented carbide body, said cemented carbide body comprising WC, 5-10 weight % Co and <0.5 weight % cubic carbides of metals from groups IVb, Vb, or VIb of the periodic table with a highly W-alloyed binder phase having a CW-ratio of 0.75-0.93 and a surface composition of the cemented carbide body being well-defined, the amount of Co on the surface being within -4 weight % to +4 weight % of the nominal Co content of the body and said coating comprising:

a first, innermost, layer of $\text{TiC}_x\text{N}_y\text{O}_z$ with $x+y+z=1$ and $y>x$ and $z<0.1$ with a thickness of 0.1-2 μm , and with equiaxed grains having a size <0.5 μm ;

a layer of $\text{TiC}_x\text{N}_y\text{O}_z$ where $x+y+z=1$, and $z=0$, $x>0.3$ and $y>0.3$, with a thickness of 5-10 μm with columnar grains having a diameter of <2 μm ;

a layer of $\text{TiC}_x\text{N}_y\text{O}_z$ where $x+y+z=1$, $z<0.5$ and $x>y$ with a thickness of 0.1-2 μm and with equiaxed or needle-like grains having a size <0.5 μm ;

a layer of smooth, textured, fine-grained $\alpha\text{-Al}_2\text{O}_3$ having a grain size of 0.5-2 μm with a thickness of 3-6 μm ; and

an outer layer of $\text{TiC}_x\text{N}_y\text{O}_z$ where $x+y+z=1$, $z<0.05$ with a thickness of 0.5-3 μm and a grain size <1 μm , the outer coating layer having been removed in at least the edge line so that the Al_2O_3 layer is on

top along the cutting edge line and the outer layer of $\text{TiC}_x\text{N}_y\text{O}_z$ is the top layer on the clearance side.

2. The cutting tool insert of claim 1 wherein the $\alpha\text{-Al}_2\text{O}_3$ layer has a texture in (012)-direction and a texture coefficient $\text{TC}(012)$ larger than 1.3.

5 *sub A1* 3. ~~The cutting tool insert of claim 1 wherein the first, innermost, layer of $\text{TiC}_x\text{N}_y\text{O}_z$ has the composition $z < 0.5$ and $y < 0.1$.~~

4. The cutting tool insert of claim 1 wherein the outer $\text{TiC}_x\text{N}_y\text{O}_z$ layer comprises a multilayer of $\text{TiN}/\text{TiC}/\text{TiN}$.

5. The cutting tool insert of claim 1 wherein the binder phase has a CW ratio of from 0.8-0.9.

6. The cutting tool insert of claim 1 wherein the cobalt content of the cemented carbide body is 5-8 weight %.

7. A method of making a cutting insert comprising a cemented carbide body and a coating wherein a WC-Co-based cemented carbide body is sintered, said sintering including a cooling step which at least to below 1200°C is performed in a hydrogen atmosphere of pressure 0.4-0.9 bar and thereafter coating said sintered body with

a first, innermost, layer of $\text{TiC}_x\text{N}_y\text{O}_z$ with a thickness of 0.1-2 μm , with equiaxed grains with size $< 0.5 \mu\text{m}$ by CVD;

a layer of $\text{TiC}_x\text{N}_y\text{O}_z$ with a thickness of 4-12 μm with columnar grains and with a diameter of $< 5 \mu\text{m}$ deposited by MTCVD

technique, using acetonitrile as the carbon and nitrogen source for forming the layer in a temperature range of 850°-900°C;

a layer of $\text{TiC}_x\text{N}_y\text{O}_z$ with a thickness of 0.1-2 μm with equiaxed or needle-like grains with size $< 0.5 \mu\text{m}$, using CVD;

5 a layer of a smooth textured $\alpha\text{-Al}_2\text{O}_3$ textured in the direction (012), (104) or (110) with a thickness of 3-8 μm using CVD; and

an outer layer of $\text{TiC}_x\text{N}_y\text{O}_z$ with a thickness of 0.5-3 μm , using CVD and thereafter removing the outer layer of $\text{TiC}_x\text{N}_y\text{O}_z$ on at least the cutting edge line so that the Al_2O_3 layer is on top along the cutting edge line and the outer layer of $\text{TiC}_x\text{N}_y\text{O}_z$ is the top layer on the clearance side of the cutting insert.